Ss brewtech FTSs Pro Modular Temperature Controller Instruction Manual

FTSs Pro Modular Temperature Controller Instruction Manual

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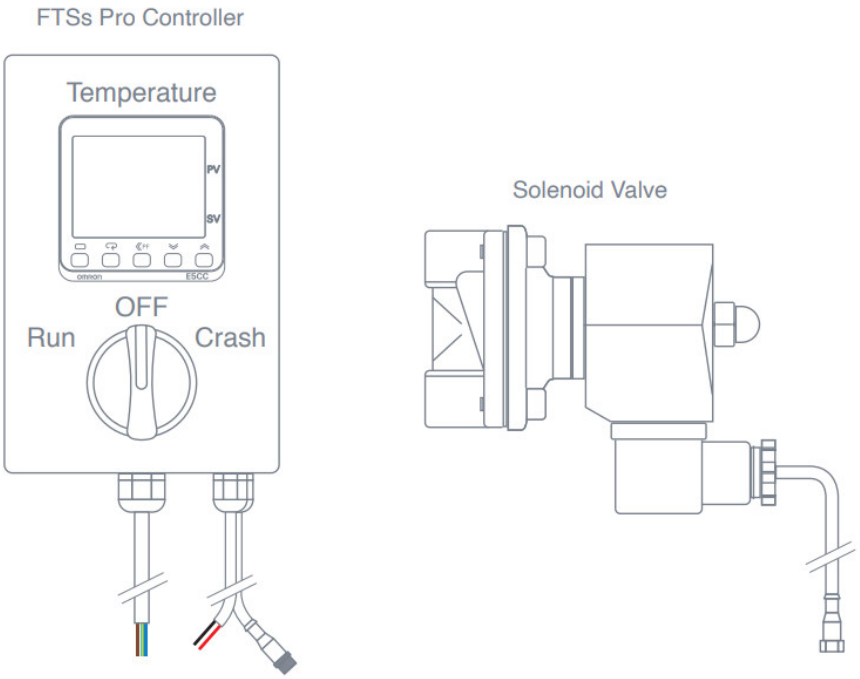
INTRODUCTION

OVERVIEW

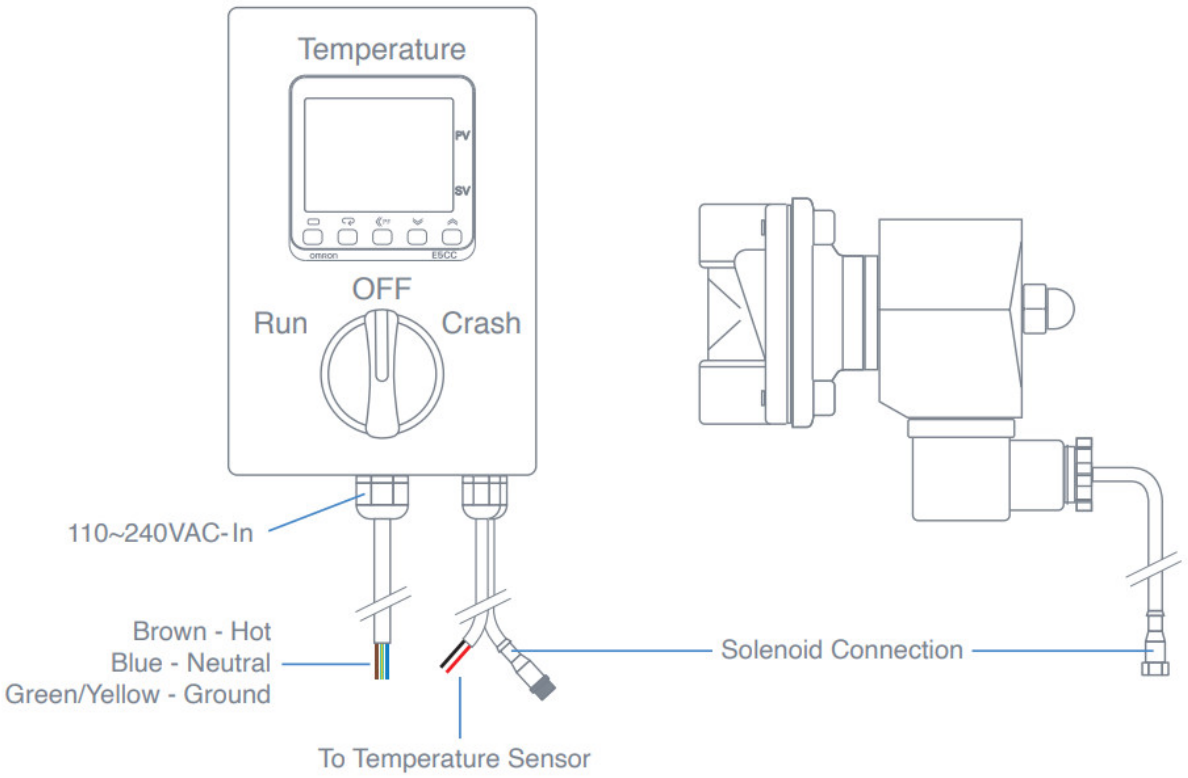
The FTSs Pro Modular Temperature Controller works in conjunction with a pressurized glycol system to provide temperature control over the contents of your vessel. It functions by using a temperature sensor to read the present value (PV) of your vessel, and triggering an output based on the set value (SV) in order to match PV with SV. When cooling is called for, the solenoid valve will open to allow the flow of glycol through your vessel's cooling jackets or coils until the set value is achieved.



SETUP

POWERING THE FTS PRO

The FTSs Pro Modular Temperature Controller comes with a lead marked “110~240VAC-in”. The three wires in this cable correspond to hot (brown wire), neutral (blue wire), and ground (green/yellow wire). A plug is purposely omitted from the cable to accommodate various methods used for supplying 110~240VAC to the unit. If you are installing a plug, BE SURE that a GFCI breaker/receptacle is installed.



SENSOR INSTALLATION

The FTSs Pro Modular Temperature Controller comes with a lead marked “Sensor”. The two wires in this cable (red and black) will connect to your temperature sensor. If you are using an Ss Brewtech vessel, your tank comes equipped with a PT100 platinum resistance thermometer. The red and black wires will connect to terminals 1 and 2 on the thermometer’s plug. The orientation of the wires does not matter, as long as they are connected to

terminals 1 and 2.

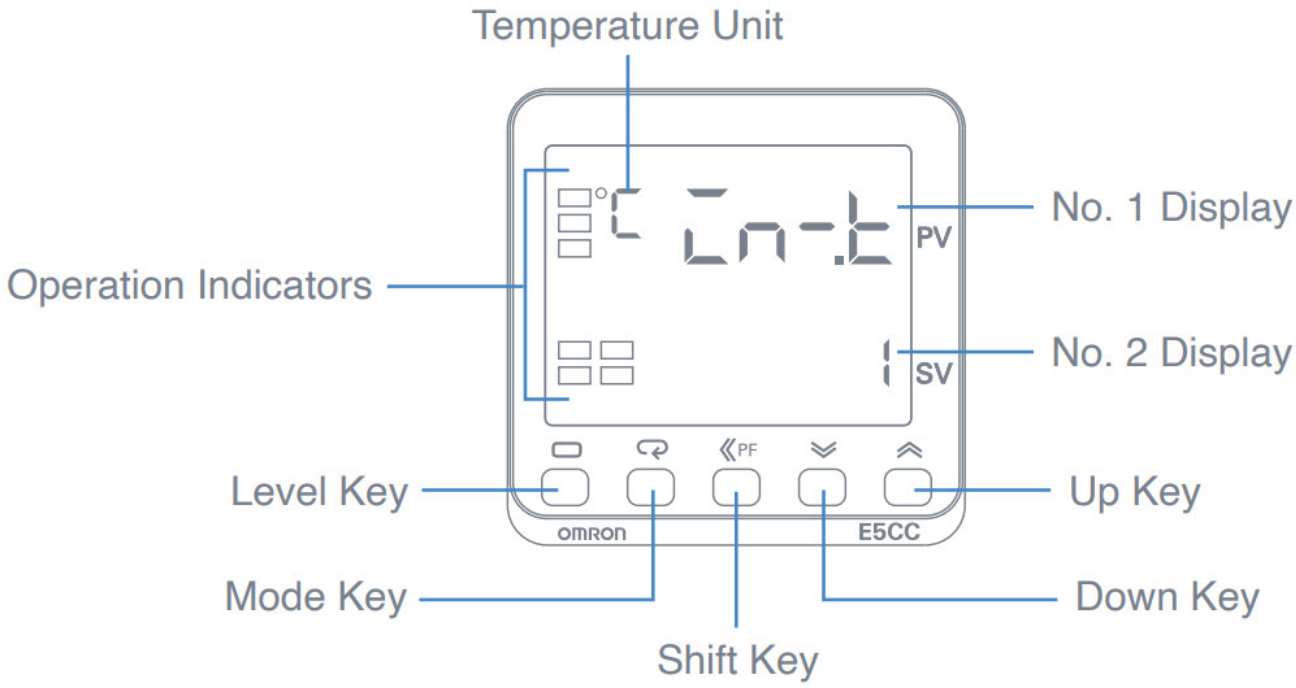
SOLENOID INSTALLATION

The FTSs Pro Modular Temperature Controller comes with either a ½" (1-3.5 bbl Unitank) or ¾" (5 bbl and larger Unitank) electric solenoid valve. Installation can be handled in a variety of ways based on preference and setup. We recommend the installation of a manual bypass piping/valve arrangement, as well as piping/valve arrangement to clear the line of glycol in the event that service is needed.

SENSOR: SETTINGS & CALIBRATION

SETTINGS

The input setting can be manipulated based on the type of sensor being used. The correct input setting for a PT100 sensor is "Cn-t: 1". This should be the default setting on your controller. If you are reading a sensor error message (S.ERR), double-check your connections to the sensor and ensure that "Cn-t" is set to 1. If you are using a different type of sensor, see the included chart to determine the proper input setting for your particular sensor.



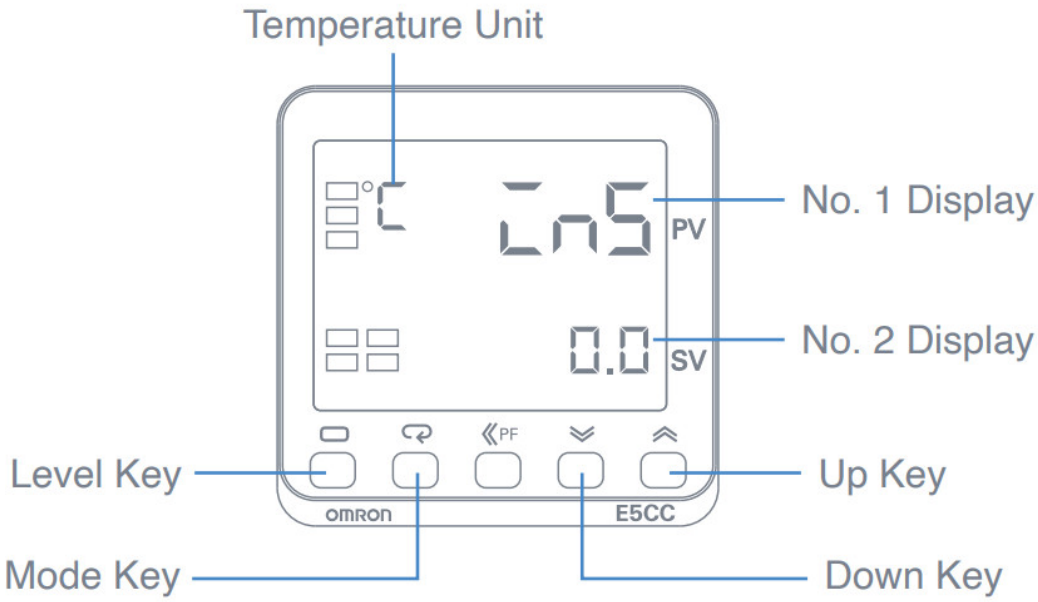
Ss Brewtech Pro Tanks ship with a PT100 type temperature sensor included. To set the temp sensor type, begin by pressing the "Level Key" (3 or more seconds).
Then press the "Mode Key" until you see "Cn-t". Finally, press the "Up" or "Down" key to select "1" for a PT100 probe. For other temp sensor options, please reference the table on the following page.
Press and hold the "Level Key" for more than 3 seconds to return to the primary display.

OTHER TEMP SENSOR OPTIONS

	Input type	Name	Set Value	Input Temperature Setup Range
Platinum resistance they mometer input type	Platinum resistance thermometer	Pt100	0	-200 to 850 (°C)/ -300 to 1500 (°F)
			1	-199.9 to 500.0 (°C)/ -199.9 to 900.0 (°F)
			2	0.0 to 100.0 (°C)/ 0.0 to 210.0 (°F)
		JPt100	3	-199.9 to 500.0 (°C)/ -199.9 to 900.0 (°F)
			4	0.0 to 100.0 (°C)/ 0.0 to 210.0 (°F)

CALIBRATION

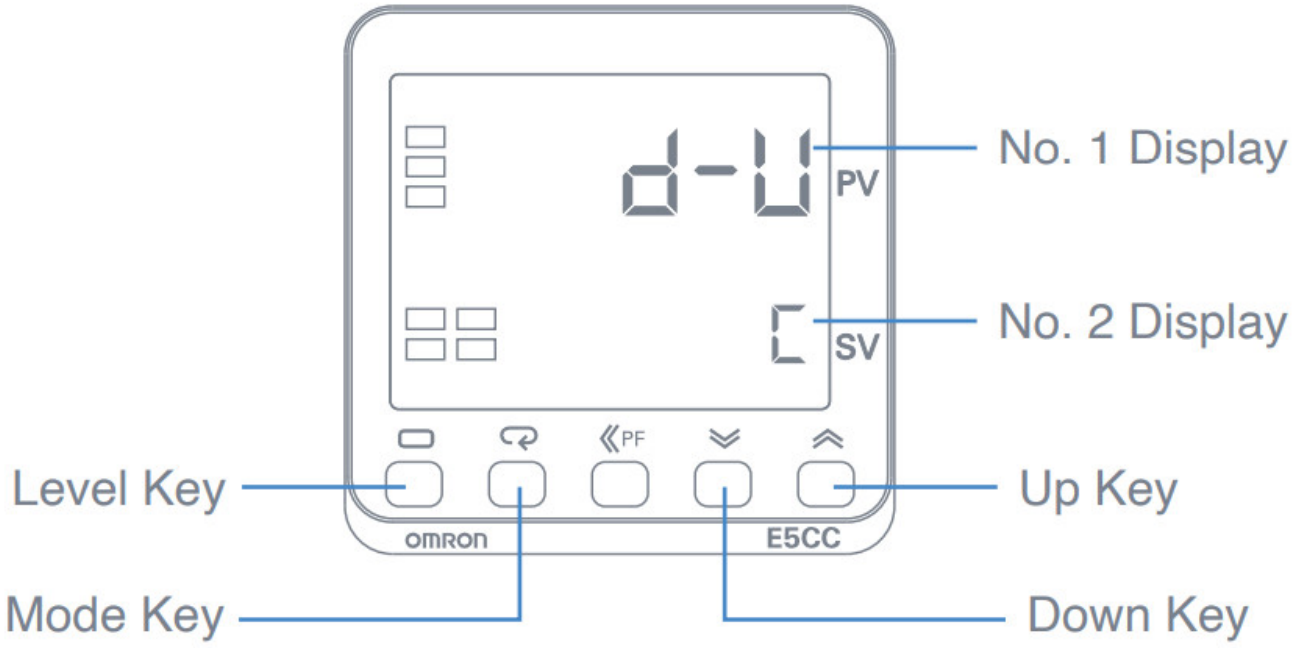
Before use, it is important to ensure that your sensor is properly calibrated. There are several ways of calibrating a temperature sensor, but the simplest way is to use an ice-water mixture. When you insert your sensor into an ice-water mixture, it should read 32°F (0°C). Perform the “ice method” of calibration and document the offset, if any. You can then set a temperature offset on the controller to reflect this variation.
Press the “Level Key” for less than 1 second, and then use the “Mode Key” until you see “Cn5”. Next use the “Up” or “Down” key to change the temperature offset.
Press the “Level Key” for less than 1 second to exit to the main screen.



ADDITIONAL MENU SETTINGS

The FTSs Pro Modular Temperature controller uses an Omron Digital Controller as the “brains of the operation”. It contains a whole host of menu options and settings that are not crucial to the basic functioning of your FTSs Pro. Outlined below are a few of the more pertinent menu settings. For more detailed information, please consult the Omron Programming Guides.

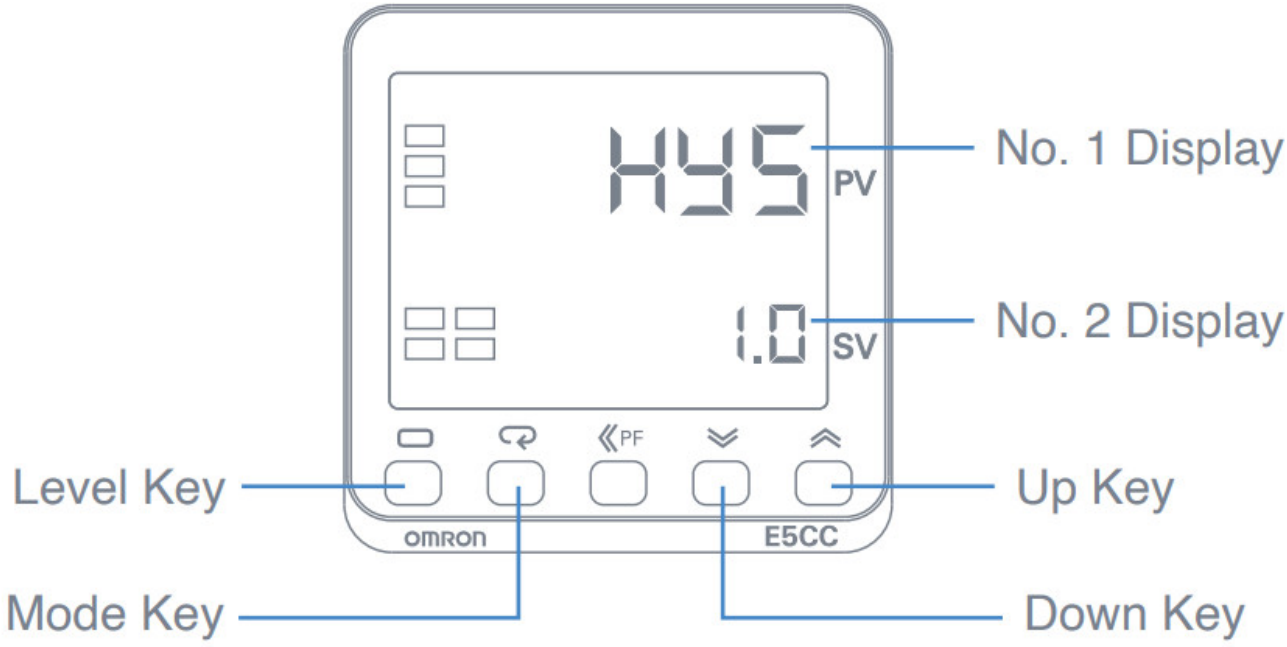
TEMPERATURE UNITS
The FTSs Pro Modular Temperature Controller allows the user to toggle between Fahrenheit and Celsius. To do so, hold the “Level Key” for 3 or more seconds and then press the “Mode Key” until you see “d-U”. Press the “Up” or “Down” Keys to toggle between Fahrenheit (F) and Celsius (C).



HYSTERESIS

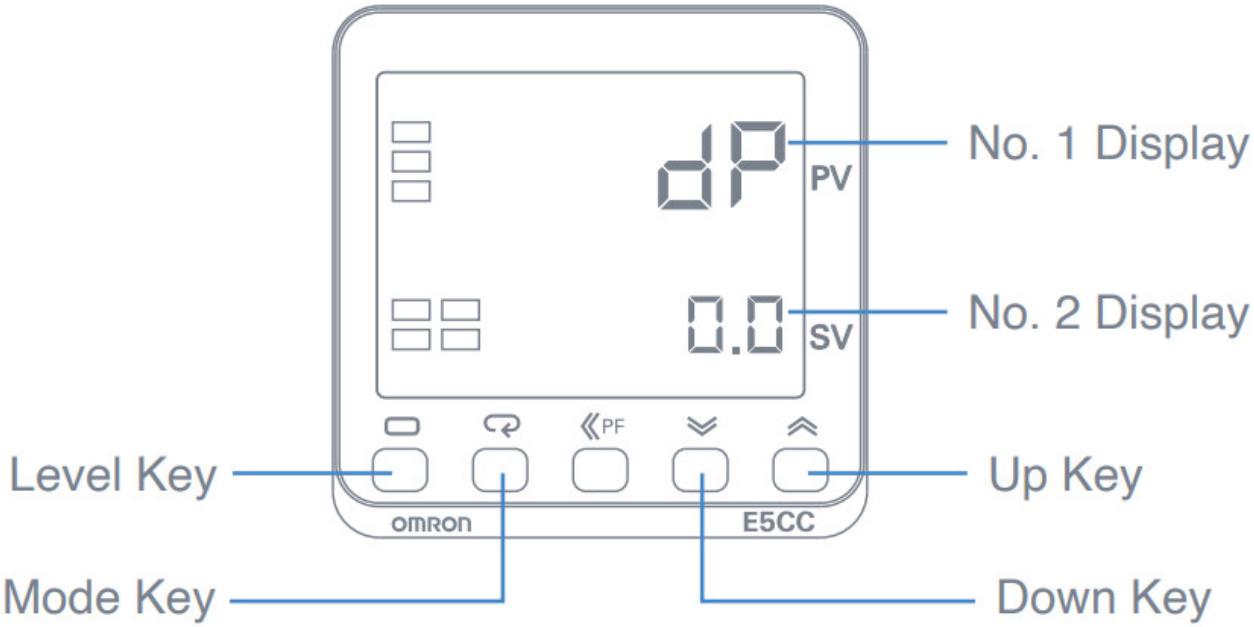
The FTSs Pro Modular Temperature Controller allows you to set a hysteresis value. This value represents the number of degrees away from the set value that the Omron will trigger an output. Press the “Level Key” for 3 or more seconds and then press the “Mode Key” until you see “HYS”. Press the “Up” or “Down” Keys to adjust the value.

For example, if the hysteresis is set to “1” (default setting), then the solenoid valve will only open when the PV is one degree or greater above the SV. We recommend leaving this value at “1” to prevent over-cycling of the system.



DECIMAL POINTS

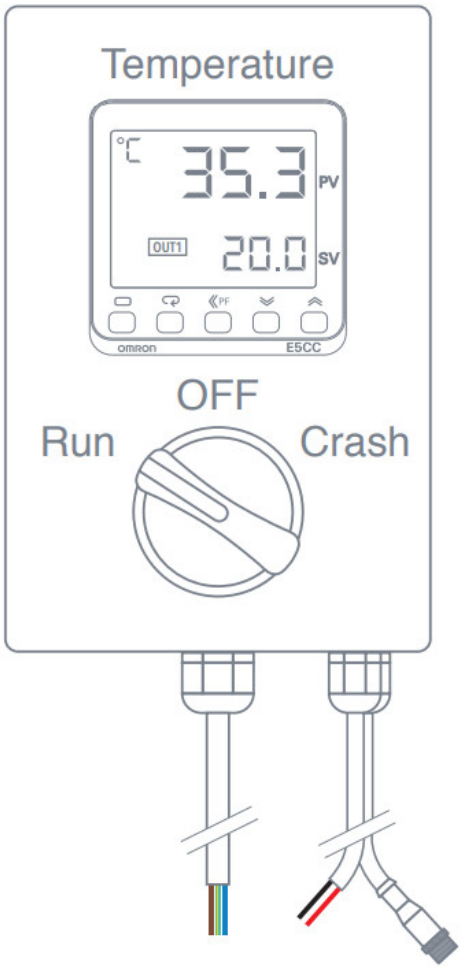
The controller can be set to adjust the decimal point displayed on the controller. This is handy if you wish to have finer temperature control, or if you are using a smaller hysteresis value. Press and hold the “Level Key” for less than 1 second and then press the “Mode Key” until you see “do”. Use the “Up” or “Down” Keys to move the decimal points. Press the “Level Key” for less than 1 second to exit.



OPERATIONS

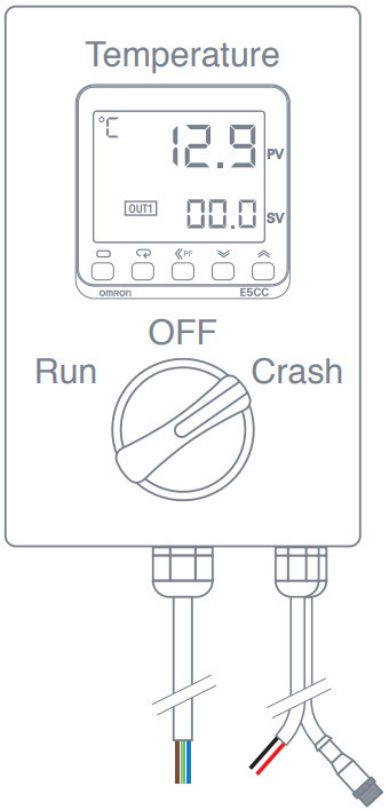
RUN

When in “Run” mode, the user can select a set value using the up and down keys. This can be used to maintain fermentation temperatures, or for cooling purposes. When the set value is below the present value, “OUT” will display on the controller and the solenoid valve will open. When the set value is achieved, “OUT” will disappear from the display and the solenoid valve will close.



CRASH

When in “Crash” mode, the user can quickly toggle to a programmable “crash” temperature (0°C, for example). The controller will memorize this temperature, and by simply turning the switch you can switch to this temperature without toggling the up and down keys.



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Documents / Resources

	Ss brewtech FTSs Pro Modular Temperature Controller [pdf] Instruction Manual FTSs Pro Modular Temperature Controller, FTSs Pro, Modular Temperature Controller
	Ss brewtech FTSs Pro Modular Temperature Controller [pdf] User Guide FTSs Pro Controller, FTSs Pro, Modular Temperature Controller, FTSs Pro Modular Temperatur e Controller

References

- SsBrewtech.com